

CLAIMS

1. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:
 - a body member having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end connected to the inlet housing;
 - a valve member slideably positioned in the through bore of the body member;
 - an eductor slideably and rotatably received in the body member, the eductor in contact with the valve member and in fluid communication with a source of chemical concentrate;
 - a trigger member connected to the body member and eductor to cause slideable movement of the eductor;
 - the eductor and valve member constructed and arranged to provide control of both different concentrations of chemical concentrate and different flow rates of water and chemical concentrate.
2. The dispenser of claim 1 wherein the eductor is composed of first and second parts, only one of which is rotatable.
3. The dispenser of claim 2 wherein the first part of the eductor is rotatable and extends from the body member.
4. The dispenser of claim 3 wherein a second part is nonrotatable and the first and second parts of the eductor provide a fluid passage.
5. The dispenser of claim 4 further including a dilution adjustment member connected to the rotatable eductor for fluid communication with the fluid passage.
6. The dispenser of claim 5 further including a product passage and a vent passage in the body member and a seal constructed and arranged to seal both the product passage and the vent passage.

7. The dispenser of claim 5 wherein the dilution adjustment member includes a multiplicity of different sized passages.

8. The dispenser of claim 1 wherein the valve member includes first and second valve members operatively associated with the nonrotatable eductor, the valve members constructed and arranged so that when the first valve member is moved in a linear slideable manner with respect to the second valve member, a first flow rate is effected and when the second valve member is moved in a linear slideable manner with respect to the body portion with the first valve member moved linearly with respect to the second valve member, a second faster flow rate is established.

9. The dispenser of claim 8 further including a flow control device operatively associated with the first valve member.

10. The dispenser of claim 9 wherein said flow control device is provided by a plurality of grooves in said first valve member and a resilient member connected to the second valve member for engagement in said grooves.

11. The dispenser of claim 1 further including an elongated spout connected to the body member, the spout adapted to be hung on a bucket.

12. The dispenser of claim 11 further including a flexible tube member connected to the eductor and the spout.

13. The dispenser of claim 1 further including a spray nozzle connected to the eductor.

14. The dispenser of claim 1 wherein the trigger member includes a latching mechanism.

15. The dispenser of claim 1 wherein the valve member includes first and second valve members, the second valve member in contact with but unconnected to the nonrotatable eductor, the valve members constructed and arranged so that when the first valve member is moved in a linear slideable manner with respect to the second valve member, a first flow rate is effected and when the second valve member is moved in a linear slideable manner with respect to the body portion with the first valve member moved linearly with respect to the second valve member, a second faster flow rate is established.

16. The dispenser of claim 15 further including a flow control device operatively associated with the first and second valve members.

17. The dispenser of claim 16 wherein the flow control device includes grooves in the first valve member and a resilient member carried by the second valve member in contact with the grooves.

18. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:
a body member having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end;
a product passage and a vent passage communicating with the through bore;
an eductor slideably and rotatably received in the through bore; and
a valve member positioned in the through bore for regulating the flow of water through the through bore and the eductor.

19. The dispenser of claim 18 wherein the eductor is composed of first and second parts, only one of which is rotatable.

20. The dispenser of claim 19 wherein the first part of the eductor is rotatable and extends from the body member.

21. The dispenser of claim 20 wherein the second part of the eductor is nonrotatable and the first and second parts of the eductor provide a fluid passage with the product passage.

22. The dispenser of claim 21 further including a dilution adjustment member connected to the rotatable eductor.

23. The dispenser of claim 18 wherein a seal is constructed and arranged to seal both the product passage and the vent passage.

24. The dispenser of claim 22 wherein the dilution adjustment member includes a multiplicity of different sized passages.

25. The dispenser of claim 18 wherein the valve member is composed of two parts with one part being slideable within the other part and providing a sealing contact therebetween, the second part providing a passage for liquid therethrough.

26. The dispenser of claim 25 wherein the one part is free to slide over the other part a predetermined distance.

27. The dispenser of claim 26 wherein the one part includes a multiplicity of grooves and the other part has a resilient member connected thereto, the grooves and resilient member constructed and arranged to provide pressure compensation when the resilient member is contacted by pressurized water.

28. The dispenser of claim 27 further including a back flow preventer member positioned at the inlet end.

29. The dispenser of claim 28 further including a hose connection adjacent the back flow preventer.

30. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:

a body having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end.

a product passage and a vent passage communicating with the through bore;

an eductor slideably and rotatably received in the through bore;

a valve member positioned in the through bore for regulating the flow of water through the through bore and the eductor; and

engageable stop surfaces located on the body and the eductor, the stop surfaces constructed and arranged to provide at least two different positions for the eductor.

31. The dispenser of claim 30 further including a biasing member positioned between the housing and the eductor.

32. The dispenser of claim 31 further including a trigger member pivotally connected to the body, the trigger member including a contacting surface constructed and arranged to engage the eductor.

33. The dispenser of claim 32 further including a latching member extending from the body for engagement with the trigger member.

34. The dispenser of claim 33 wherein the latching member includes a positive contact surface.

35. The dispenser of claim 30 further including indexing members operatively associated with the body member and the eductor.

36. The dispenser of claim 35 wherein the indexing member includes frictional engagement arms extending from the body notches in the eductor for engagement with frictional engagement arms.

37. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:

a body member having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end;
the body including a finger engaging portion extending therefrom at the inlet;

a trigger member pivotally connected to the body and extending over a portion of the body opposite the finger engaging portion;

a product passage and a vent passage communicating with the through bore;

an eductor slideably and rotatably received in the through bore; and

a valve member positioned in the through bore for regulating the flow of water through the through bore and the eductor.

38. The dispenser of claim 37 wherein the trigger member includes an essentially flat thumb engaging portion.

39. The dispenser of claim 38 wherein the inlet includes a hose engaging member extending over a portion of the finger engaging portion.

40. The dispenser of claim 39 further including a bottle engaging portion extending from the body.

41. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water at different flow rates comprising:

an inlet housing for connection to a water source;

a body member connected to the inlet housing;

a shuttle valve member slideably positioned in the body member;

an eductor slideably and rotatably received in the body member, the body member adapted to be in fluid communication with a source of chemical concentrate;

a trigger member connected to the body member and eductor to cause slideable movement of the eductor;

the eductor and shuttle valve member constructed and arranged to provide control of both different concentrations of chemical concentrate and different flow rates of water and chemical concentrate.

42. The dispenser of claim 11 wherein the eductor is composed of first and second parts, only one of which is rotatable.

43. The dispenser of claim 12 wherein the first part of the eductor is rotatable and extends from the body member.

44. The dispenser of claim 13 wherein a second part is nonrotatable and includes a fluid passage.

45. The dispenser of claim 14 further including a dilution adjustment member connected to the rotatable eductor.

46. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:

a body member having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end connected to the inlet housing;

a valve member slideably positioned in the through bore of the body member;

an eductor slideably and rotatably received in the body member, the eductor in contact with the valve member and in fluid communication with a source of chemical concentrate;

a trigger member connected to the body member and eductor to cause slideable movement of the eductor;

the eductor and valve member constructed and arranged to provide control of both different concentrations of chemical concentrate and different flow rates of water and chemical concentrate; and

a container for chemical concentrate connected to the body member.

47. The dispenser of claim 47 wherein the eductor is composed of first and second parts, only one of which is rotatable.

48. The dispenser of claim 47 wherein the first part of the eductor is rotatable and extends from the body member.

49. The dispenser of claim 48 wherein the first and the second part of the eductor provide a fluid passage.

50. The dispenser of claim 49 further including a dilution adjustment member connected to the rotatable eductor for seating in a fluid inlet passage from the container.

51. The dispenser of claim 50 further including a product passage and a vent passage in said body member and a seal member constructed and arranged to seal both the fluid passage and the vent passage.

52. The dispenser of claim 50 wherein the adjustment member includes a multiplicity of different sized passageways.

53. An eductor for use with a dispenser apparatus comprising:
a housing member having a first passageway therethrough;
a multiplicity of second passageways extending from an outside wall and to an end wall thereof; and
an adapter member having a multiplicity of passageways, a portion of the passageways of the adapter member constructed and arranged to be placed in the second passageways.

54. The eductor of claim 53 wherein at least some of the passageways of the adapter have different widths.

55. The eductor of claim 54 wherein a portion of the passageways of the adapter are tubular.

56. The eductor of claim 53 wherein the adapter includes a multiplicity of projections extending from the end wall.

57. The eductor of claim 53 wherein the adapter member is retained in the eductor by frictional engagement.

58. The eductor of claim 53 wherein the body member and the adapter member have indexing members.

59. The eductor of claim 53 wherein the first passageway is centrally located in the housing member and the multiplicity of second passageways are located in an annular configuration with respect thereto.

60. The eductor of claim 53 further including an orientation projection extending from the adapter member for reception in a compartment of the housing member.

61. An adapter member for selective flow of chemical concentrate in a dispenser apparatus having a body member with an eductor having a housing member for placement in the dispenser body member, the eductor housing member having a first passageway therethrough and a multiplicity of second passageways extending from an outside wall to an end wall thereof, and an adapter member including a multiplicity of passageways, a portion of each of the passageways of the adapter member constructed and arranged to be placed in the second passageways.

62. The adapter member of claim 61 wherein at least some of the passageways of the adapter have different widths.

63. The adapter member of claim 62 wherein a portion of the passageways of the adapter are tubular.

64. The adapter member of claim 61 wherein the adapter member includes a multiplicity of projections extending from an end wall.

65. The adapter member of claim 61 wherein the adapter member is retained in the eductor by frictional engagement.

66. The adapter member of claim 61 wherein the adapter member includes an orientation member.

67. The adapter member of claim 61 wherein the multiplicity of passageways of the adapter are located in an annular configuration.

68. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising;

- a body member having a through bore with an inlet end adapter to be connected to a source of pressurized water at one end and an outlet at the opposite end;
- a product passage and a vent passage communicating with the through bore;
- an eductor slideably and rotatably received in the through bore, the eductor having a first passageway therethrough and a multiplicity of second passageways extending from an outside wall and to an end wall thereof;
- at least two adapter members having a multiplicity of passageways, a portion of the adapter member constructed and arranged to be placed in the second passageways; and
- a valve member positioned in the through bore for regulating the flow of water through the through bore and the eductor.

69. The dispenser of claim 68 wherein at least some of the passageways of the adapter have different widths.

70. The dispenser of claim 69 wherein a portion of the passageways of the adapter are tubular.

71. The dispenser of claim 68 wherein the adapter includes a multiplicity of projections extending from an end wall.

72. The dispenser of claim 68 wherein the adapter member is adapted to be retained in the eductor by frictional engagement.

73. The eductor of claim 68 wherein the eductor member and the adapter have an indexing member.

74. The eductor of claim 68 wherein the multiplicity of passageways located in the adapter are positioned in an annular configuration.

75. The eductor of claim 68 wherein the adapter members are of different colors.

76. The eductor of claim 75 wherein the adapter members are composed of a plastic material.

77. A dispenser for dispensing different concentrations of chemical concentrate into a stream of water from a concentrate container at different flow rates comprising:

a body member having a through bore with an inlet end adapted to be connected to a source of pressurized water at one end and an outlet at the opposite end;
a product passage and a vent passage communicating with the through bore;
and

an eductor slideably and rotatably received in the through bore.

78. The dispenser of claim 77 wherein the eductor is composed of first and second parts, only one of which is rotatable.

79. The dispenser of claim 78 wherein the first part of the eductor is rotatable and extends from the body member.

80. The dispenser of claim 79 wherein the second part of the eductor is nonrotatable and the first and second parts of the eductor provide a fluid passage with the product passage.